



MATERIAL SAFETY DATA SHEET

MSDS No. 108277
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HINO LLC EX SUPER

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Emergency Number : General Information :
Chemtrec : 800/424-9300 CCI : 630/739-0606

SECTION I - IDENTIFICATION

Product : HINO LLC EX SUPER

Synonyms : None

Chemical Family : Ethylene Glycol solution of salts

Cas RN : Mixture - no single Cas number applicable

SECTION II - INGREDIENTS

<u>Components</u>	<u>Cas RN</u>	<u>Nominal %</u>	<u>Hazard Code</u>	<u>PEL/TLV</u>	<u>Hazard</u>
Ethylene Glycol	107-21-1	45 - 50%	A	No OSHA PEL; ACGIH TLV (2004) Ceiling Limit of 100 mg/m ³ for Aerosol Only	Respiratory irritant Ingestion may produce liver, brain and kidney damage.
Potassium Hydroxide	1310-58-3	1 – 3%	A	No OSHA PEL; ACGIH TLV (2004) Ceiling Limit of 2 mg/m ³	Skin, eye and respiratory irritant. GI tract salts inflammation.
Hydrated inorganic acid, organic acid salts	pro-prietary	Less than 5%	N/A	No OSHA PEL or ACGIH TLV (2004) has been established.	None noted.
Water	7732-18-5	45 - 50%	N/A	None	None noted.
Bittering agent	pro-prietary	>30mg/kg	A	Not established	Skin, eye and respiratory irritant

SECTION III - HEALTH INFORMATION

Inhalation : Breathing excessive levels of the vapor or mist can irritate the respiratory tract. Excessive vapor concentrations of the major component (ethylene glycol), as might be generated during heating of this material, have occasionally been reported to cause adverse effects on the blood-forming system and the nervous system.

Ingestion : The acute oral toxicities of the components of this mixture are as follows :

Ethylene Glycol :

The lowest dose reported to produce death in humans was estimated to be 710 mg/kg body weight; for a person weighing 150 pounds, this would be equivalent to drinking about one and one-half (1.5) fluid ounces of pure ethylene glycol in a short period of time.

Acute oral LD50's = 4,700 mg/kg (rats)
7,500 mg/kg (mice)
2,000 mg/kg (cats)

Potassium Hydroxide :

Acute oral LD50's= 365 mg/kg (rats)

Diethylene glycol :

Acute oral LD50's = 1,000 mg/kg (humans)
14,800 mg/kg (rats)
9,000 mg/kg (dogs)

Eye Contact : . Based on the pH and irritation potential of this mixture's constituents, the mist or liquid can be expected to cause mild to moderate irritation or inflammation of the eyes

Skin Contact : The acute dermal LD50 of the major component (ethylene glycol) of this product is 11.89 g/kg(rabbits). Based on the pH and the irritation potential of this mixture's constituents, the mist or liquid can be expected to cause mild to moderate irritation of the skin.

Carcinogenicity Listing IARC : () OSHA : () NTP : () Not listed : (X)

SECTION IV - OCCUPATIONAL EXPOSURE LIMITS

PEL (OSHA Permissible Exposure Limit) : None established for mixture, See Section II.

TLV (ACGIH Threshold Limit Value) : None established for mixture, See Section II.

SECTION V - EMERGENCY FIRST AID PROCEDURE

For Overdose Exposure By :

Swallowing : If victim is conscious and able to swallow, quickly have victim drink water or milk to dilute. Do NOT give sodium bicarbonate, fruit juices or vinegar. NEVER give anything by mouth if victim is unconscious or having convulsions. Induce vomiting only if advised by physician or Poison Control Center. CALL PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

Skin Contact : Immediately flush skin with plenty of water while removing contaminated clothing.

Eye Contact : Immediately flush eyes with plenty of cool water for at least 15 minutes. Do NOT permit victim to rub eyes. GET MEDICAL ATTENTION IMMEDIATELY.

Inhalation : Immediately remove victim to fresh air. If victim has stopped breathing give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION VI - PHYSICAL DATA

Boiling Point : 108 C
Melting Point : (Freezing Point) less than 0 C
Vapor Pressure : Estimated 0.05 mmHg at 20 C
Density (20 C) : 1.08
Vapor Density (AIR = 1) : Not determined
pH (Original) : 7.6
Solubility in Water : Infinite miscibility
Appearance and Color : Clear, slightly viscous, pink dyed dyed liquid

SECTION VII - FIRE AND EXPLOSION HAZARDS

Flash Point : None
Auto-Ignition Temperature : Not determined (400 C for ethylene glycol)
Flammable Limits in Air, %by Vol.
Lower : Not determined (3.2% for ethylene glycol)
Upper : Not determined (15.3% for ethylene glycol)
NFPA Rating : Health (1) Fire (0) Reactivity (0)
Fire Fighting Procedures : (Note: Individuals should perform only those firefighting procedures for which they have been trained.) Use water spray, dry chemical, foam or carbon dioxide. Use water to keep fire-exposed containers cool. If a spill or leak has not ignited, use water pray to disperse the vapors. Water spray may be used to flush spills away from fire and diluted spills to noncombustible proportions (see warning on water spray on hot glycol below).

SECTION VII - FIRE AND EXPLOSION HAZARDS (CONTINUED)

Unusual Fire & Explosion Hazards : Fire fighters should wear self-contained breathing apparatus in the positive pressure mode with a full face piece when, there is a possibility of exposure to smoke, fumes or hazardous decomposition products. Water spray may cause foaming of hot glycol so indirect application of water spray or use of other extinguishing media should be used on hot glycol.

SECTION VIII - REACTIVITY

Stability : Generally stable

Hazardous Polymerization : Not likely to occur

Conditions and Materials to Avoid: Avoid concentrated strong acids, oxidizing agents and bases. Do not expose to open flame.

Hazardous Decomposition Products : If pyrolyzed, thermal decomposition products of residue may include C, CO, CO₂, H₂O, NH₃, organic vapors and nitrogen-containing.

SECTION IX - EMPLOYEE PROTECTION

Control Measures : Handle in the presence of adequate ventilation. Engineering controls should be used whenever feasible to maintain concentrations below acceptable exposure criteria (see Section II and IV), including enclosures and local exhaust ventilation.

Respiratory Protection : Where exposure is likely to exceed acceptable criteria (see Section II and IV) and engineering controls are not feasible, use NIOSH/MISHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air and in accordance with OSHA (29 CFR 1910.134).

Protective Clothing : Wear gloves and protective clothing which are impervious to the product for the duration of exposure if there is potential for skin contact.

Eye Protection : Wear safety glasses meeting the specifications of ANSI standard Z87.1 where no contact with the eye is anticipated. Chemical safety goggles meeting the specification of ANSI Standard Z87.1 should be worn whenever there is the possibility of splashing or other contact with the eyes.

SECTION X - ENVIRONMENTAL PROTECTION

- Environmental Precautions : Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill release response plan should be developed and implemented.
- Spill or Leak Procedures: Wear appropriate respiratory equipment and protective equipment as described in Section IX. Contain spilled material. Transfer to secure containers. Where necessary, collect using absorbent media. In the event of an uncontrolled release is reportable under the applicable laws and regulations.
- Waste Disposal : All recovered material should be packaged, labeled, transported, and disposed of or reclaimed in conformance with good engineering practices. Avoid land filling of liquids. Reclaim where possible.

SECTION XI - REGULATORY CONTROLS

Department of Transportation :

- DOT Classification(Bulk) : Class 9 miscellaneous
DOT Proper Shipping Name : Environmentally Hazardous Substance Liquid n.o.s.
(ethylene glycol), 9, UN3082, III
DOT Classification (Non-bulk) : Not regulated
IATA (Non-bulk) : Not regulated
IMDG Code (Non-bulk) : Not regulated

Other Regulatory Requirements :

Toxic Substance Control Act :

This product is a mixture; therefore, it is not listed in the TSCA Inventory of Chemical Substances. All of the components of the mixture are listed in the TSCA Inventory of Chemical Substances.

SARA Hazard Categories (as defined in Section 311/312)

- Health Immediate(Acute) and Delayed (Chronic)
Physical None

The product contains greater than 45 % ethylene glycol (CAS #107-21-1) which is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

California Proposition 65 :

This product does not contain any substances currently listed under California Proposition 65.

SECTION XII - PRECAUTIONS: HANDLING, STORAGE AND USAGE

- To prevent possible storage container rupture, do not permit to freeze; See section VI.
- Do not expose children and pets to this material.
- Keep container closed.
- Keep away from open flames
- After handling product, wash thoroughly with soap and water before drinking, eating, or smoking.
- Container hazardous when emptied. Since emptied containers retain product residues, all hazardous precautions described on this MSDS must be observed.

SECTION XIII - CONTACT INFORMATION

The information presented herein is believed to be factual as it has been derived from the works and opinions of people believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which CCI Manufacturing IL Corporation bears legal responsibility. The user should review any recommendation in the specific context of intended use to determine whether they are appropriate.

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